

CACTUS OF THE MONTH

Matucana Britton & Rose

by Phyllis Flechsig

Matucana is a genus of small, attractive South American barrel cacti related to *Echinopsis*. *Matucanas* deserve to be much better known than they are at present--they are good-looking, easy to grow, and flower not just once in Spring but over and over through the warm months. They are all native to Peru, and grow at elevations of 400 to 4500 meters (about $\frac{1}{2}$ mile to 2 $\frac{3}{4}$ miles) in the Andes Mountains. For the purposes of this article the very similar genus *Submatucana* will be treated as a part of *Matucana*. The chief difference is the woolly buds and flower tubes of *Submatucana* versus the smooth ones of *Matucana*. Both have been placed by Myron Kimnach into his very large genus *Borzicactus*, along with *Oreocereus*, *Bolivocereus*, *Arequipa*, and a number of other genera. This is a perfectly reasonable thing to do, as the main differences among them are their variety of growth forms, but many of us still call our plants by the old names because it seems so confusing to lump them into the super-genus *Borzicactus*.

Matucanas form a fairly distinctive subgroup within this large group: they are globular to short columnar, with brightly colored long-tubed flowers that may be wheel-shaped but are often zygomorphic--that is, they are symmetrical about only one vertical plane, as is the flower of the (unrelated) Christmas cactus. Spination varies a great deal from nearly spineless to very bristly, but is always attractive. Some *Matucanas* form only single heads, while others will cluster. Ribs are broad and low and somewhat tuberculate. Flowers appear at the top of the plant; fruits ripen very soon after flowering and open by vertical slits all around the fruit. The name *Matucana* is that of the small Peruvian town near which the first species, *M. haynei*, was discovered.

The plants grow in mountain meadows and high valleys; they are not plants of the hot lowland deserts. They get much rain in their summer (December to April) but endure cold, dry winters; often they grow under shrubs or down in grasses or ferns.

Probably the best known *Matucana* in our collections is *M. (Borzicactus) madisoniorum*, which was first described by Paul Hutchison in 1963. It is a handsome plant that starts life with stout spines but gradually loses them--the spine clusters fall off at a touch--so that adult plants are virtually spineless. The skin is a soft matte-green, and the flowers are very long-tubed and bright red.

M. aurantiaca is spherical with short, sharp spines; the flowers are about 3 inches long and orange-red.

M. aureiflora has a beautiful bright green epidermis that looks polished, short more or less appressed spines, and bright yellow flowers.

M. weberbaueri is completely covered by gold spines and has light yellow flowers.

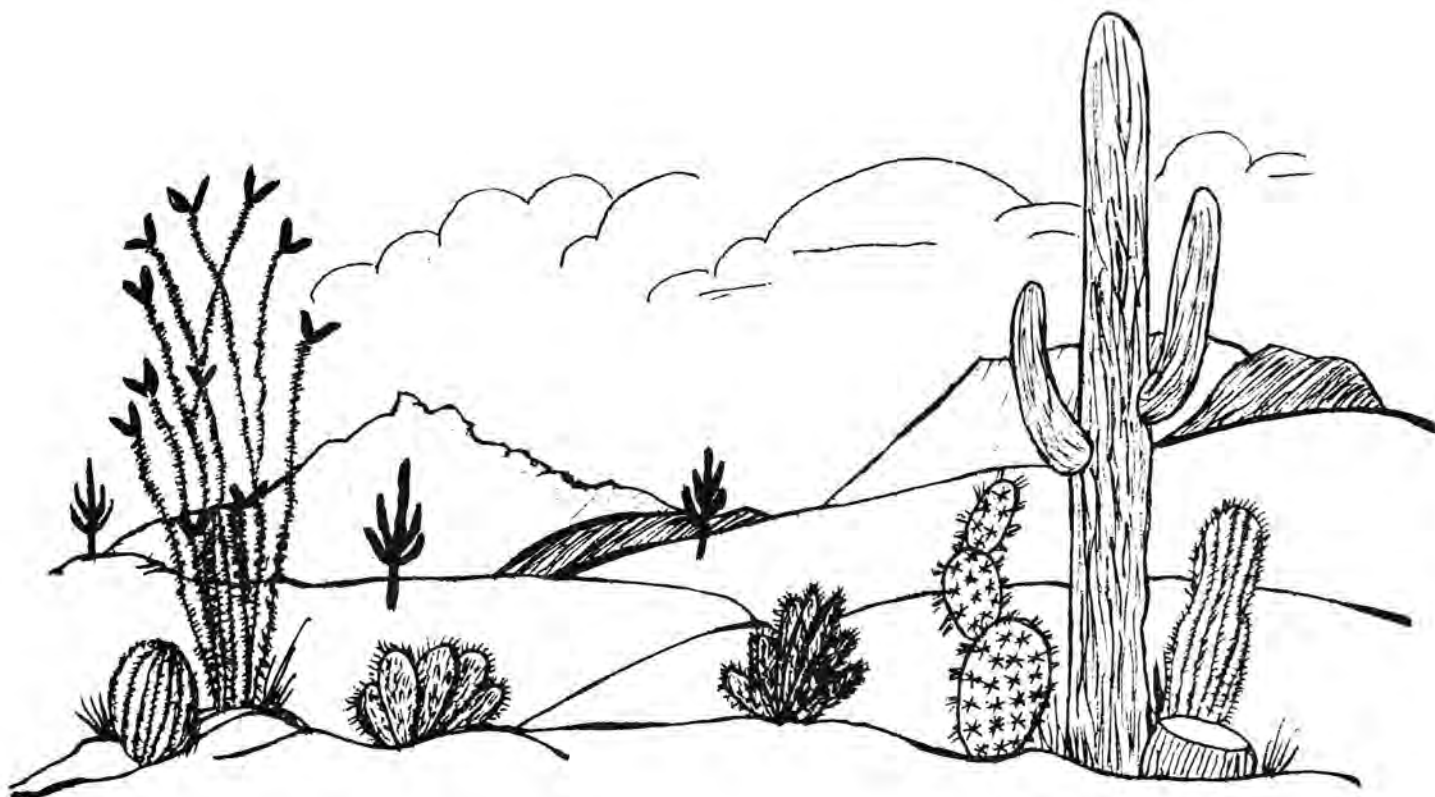
Several species are covered with short, bristly white spines--*M. haynei*, *M. crinifera*, *M. roseo-alba*, and *M. comacephala*. Flower color in these varies from red through orange to pink.

An exceptionally pretty (and young) bloomer is *M. krahni*. The plant is a small, dark green sphere with short, sparse spines and zygomorphic red flowers that have violet edges.

Matucanas are usually propagated from seed, which will produce a blooming-size plant in three or four years. Because of their mountain origin, they are best kept cool and dry in winter, and most need light shade with ample food and water in summer. Pests are the usual cactus ones--scale, mealybug, and red spider mites. Occasional drenching of the soil with a systemic insecticide will prevent these from making a meal out of your plants. Overall, Matucanas seem to be very easy to grow.

LITERATURE CONSULTED:

- Andersohn, G. *Cacti and Succulents*. EP Publishing Limited, 1983.
Backeberg, C. *Cactus Lexicon*. Blandford Press, 1976.
Barthlott, W. *Cacti*. Thornes, 1979.
Hutchison, P. *Icones plantarum succulentarum*. 22. *Borzicactus madisoniorum*, sp. nov. *Cactus & Succulent Journal*, XXXV, p. 167-172 (1963).
Riha, J., and R. Subik. *The Illustrated Encyclopedia of Cacti and Other Succulents*. Octopus Books, 1981.



NOTICE OF PROPOSED CHANGE TO THE SDC&SS
BY-LAWS

A suggestion was made and approved by your Board of Directors & Officers to amend the By-Laws, Article IV from:

ARTICLE IV - OFFICERS

Section 1

The officers of the Society shall be: President, First Vice President, Second Vice President, Recording Secretary, Corresponding Secretary, Treasurer and six (6) Directors.

Amend to:

ARTICLE IV - OFFICERS

Section 1

The officers of the Society shall be: President, Vice President, Recording Secretary, Treasurer and six (6) Directors.

NOTE: By eliminating the Second Vice President and Corresponding Secretary their previous functions will be appointed by the President. The President has these powers as described in the present SDC&CC By-Laws. We will vote on this at the Nov. meeting.



Last Chance

REMEMBER----- only registered members of our club are invited to the Christmas Party. NO GUESTS FOR THIS MEETING.

Registration for the Christmas Party December 1, 1984 (Please Note Date)

Name of Member _____

Immediate Family Member(s) _____

NOTE: Registration Must be in by the end of the November 10th meeting. Those members registered will receive a gift plant. All others will not receive a gift plant this year. There will be only enough gift plants for registered members. Please return this registration to any officer or board members.

SUCCULENTS-OF-THE-MONTH

Cucurbitaceae & Dioscoreaceae

by Rick Latimer

The Gourd or Cucumber family includes about 850 species in about 100 genera. The species are mostly native to tropical and subtropical regions. Plants are usually prostrate or climbing vine-like herbs that are most often annuals although some are perennials. The flowers are usually unisexual (separate sexes in separate flowers which may be on the same plant) with some species dioecious (separate sexes on separate plants), although a few species are bisexual (both sexes united in the same flower). The fruit, which often gets quite large, is a berry containing many seeds. The fruits may be small black berries as in the case of Bryonia alba from southern Europe or get quite large as in the case of the edible and/or economically useful members of the family. There are many cultivated varieties of Cucurbita maxima. In Europe they are called pumpkins, but in the United States they are called squashes. The American pumpkin is C. pepo, which has the variety C. p. var. ovifera having small hard fruits that provide the ornamental gourds. Other important food crops in this family are watermelon (Citrullus) and cucumber (Cucumis). An interesting species is Ecballinum elaterium, the squirting cucumber from the Mediterranean region in Europe. It is an annual with explosive fruits which can eject its hard seeds some 10 to 25 feet!

The succulent members of the family, like the rest of this plant family are distributed in both the Old and New Worlds. Close to home, one of the San Diego County native members of this family is Marah macrocarpus (which ranges all the way up to Santa Barbara). It has perennial tuberous roots with annual trailing vines. Of similar habit is the best known succulent member of this family from North America - Ibervillea sonorae (with variety sonorae from mainland Mexico and var. peninsularis from Baja). The tubers are the same color as the soil that they grow in and are therefore difficult to spot. The liana-like shoots may reach lengths of 3 or more meters. The leaves are palmate and are either blue (var. son.) or green (var. pen.). The flowers are small and yellow. The fruits are orange. There is a case of a tuber sitting on a museum shelf for six years and sending out shoots each of those years. I. tripartita is native to southern Texas and has a large attractive



leaf of:
Marah macrocarpus,
Gerrardanthus macrorhizus,
Ibervillea tripartita

leaf of:
Momordica rostrata



leaf of:
Neesalsomitra podagria



leaf of
Kedrostris africana

seed pods. A closely related genus is Tumamoca. T. macedougallii from the Tucson area also has a tuber and has small red berries.

From southwestern Africa comes Acanthosicyos horrida. This dioecious, monotypic, and endemic plant has branches with 1 inch long thorns. The taproot may reach up to 40 feet in length. The spiny $\frac{1}{2}$ kg. fruit is edible. From the other side of Africa (in fact the island of Socotra) lives Dendrosicyos socotrana. Although this plant is not found yet in cultivation, it should be mentioned since its barrel shaped stem up to 1 meter thick and up to 6 meters tall with its sparsely branched crown would seem to have nothing in common with this family. Although the plant looks more like a baobab, the flowers and fruits reveal its true relationship. (The fruits are hairy.) The other African cucurbs are more in line with what we would expect. Gerrardanthus macrorrhizus from the dry parts of Kenya and northern Tanzania usually grows between boulders. Its gray-green caudex grows above ground and may reach a diameter of 80 cm. (30 inches). As before, the liana-like shoots may get up to several meters long. The flowers are insignificant and may be olive green to dark brown. Another plant of this type is Momordica rostrata from eastern Africa. It is different than the last one in that the caudex is almost ribbed, the leaves are not maple leaf shaped but are pinnate in threes, the flowers are relatively large and yellow-orange, and instead of small capsules the fruits are larger and coral red. Still another one is Kedrostris africana with deep orange fruits from southern and eastern Africa and from the same large habitat is Telfairia pedata with purplish flowers and green fruit. In contrast, is Corallocarpus tenuissimus from South Africa and Zimbabwe. The plants are described as much branched and erect with angled stems that are very succulent. Another member of this genus comes from across the Red Sea from Africa - Yemen. It is C. glomeruliflorus and its upper branches are hairy, the dioecious flowers are yellow-green and the fruits are small, egg shaped, and orange. From Madagascar we have two very interesting genera: Seyrigia and Xerosicyos. The first genus has species with succulent stems and tubers (and very insignificant flowers). S. humbertii has stems that are covered with white hairs, while S. gracilis has smooth, round stems that are purplish-brown with white polka dots. However, the Xerosicyos species are leaf succulents! The most commonly seen species is X. danguyi with disk shaped leaves, which can grow into a very large vine.

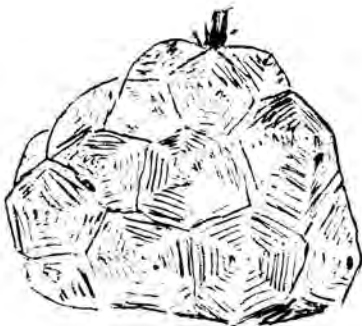
There are still plenty of genera: Aniosperma, Apodanthera, Ceratanthes, Cucurbita, Echinocystis, Eurandria, Pisoperma, Raphanocarpus, and Zehneria (=Melorithia) with succulent members, but these so far are neither grown in cultivation, let alone even heard of. One more succulent cucurb worth mentioning is Neosalsmitra podagrica from the Sunda Islands of Indonesia. The plant is a liana with egg shaped stem segments that have hard thorns (which are modified leaf petioles). Another species is N. sarcophylla from the Philippines, Thailand, and Burma.

The cucumber family is relatively closely related to the passion flower family, so the closest succulent allies are the succulent members of the genus Adenia. (Worth mentioning is the fact that John Hutchinson considered the cactus family to also be related to this family!) Completely unrelated to the cucumber family is the yam family or Dioscoreaceae. The yam family is a distant relative of the lily family and is

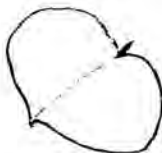
therefore a monocot. (The yam family is not to be confused with the sweet potato family = morning glory family, which like the cucumber family is a dicot.) The plants of this second plant-of-the-month family are also usually caudiciform with lianas and again the flowers are usually unisexual (rarely bisexual) and most often dioecious. The yam family consists of 10 genera with about 650 species. The edible yam is Dioscorea batatas (- the sweet potato is Ipomoea batatas). The two best known succulents are D. elephantipes from southern Africa and D. macrostachya from Mexico. Both plants consist of caudices that look like tortoise shells when mature that send out vines annually (in the winter in the case of the former and in the summer in the case of the latter). The african species base is considered more attractive, having corkier polygonal protuberances; while the mexican species has more intricate heart shaped leaves that ~~are short~~. The african species is said to get up to 3 feet in diameter and weigh over 100 pounds (try lugging that one to a show!) with vines 20 to 30 feet long. This plant is sometimes seen under the name Testudinaria. The seedlings, at least do better if watered during the "dormant" period.

REFERENCES:

- J. W. Dodson, Introduction to the Study of Succulent Plants.
 John Hutchinson, The Families of Flowering Plants.
 Clive Innes, The Complete Handbook of Cacti and Succulents.
 Hermann Jacobsen, A Handbook of Succulent Plants.
 Alice Knox, "The Stem of Ibervillea sonora", The Torrey Botanical Club Bulletin v. 34, pp. 329-30.
 George H. M. Lawrence, Taxonomy of Vascular Plants.
 Philip A. Munz, A California Flora
 F.A. Novak, The Pictorial Encyclopedia of Plants and Flowers
 Werner Rauh, The Wonderful World of Succulents



Dioscorea elephantipes



Dioscorea elephantipes
 (leaf not same
 scale as caudex)



Dioscorea macrostachya
 (leaf)

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Orientation:

The San Diego Cactus & Succulent Society is open to all persons interested in growing cacti, other succulents and exotic plants. Meetings are held the second Saturday of each month at 1:30 pm in Room 101, Casa del Prado, Balboa Park. Board of Directors meetings are held after the general meetings. Annual dues are \$8.00 per single member per year, \$2.00 for each additional member of a household within a family. Single copies of Espinas y Flores are 60 cents.

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